

## REMARKS

This application has been carefully considered in connection with the Examiner's Office Action dated September 13, 2006.

By the Office Action of September 13, 2006, the Examiner rejected Claims 1-25 on various grounds discussed below.

### **Summary of Rejections**

Claims 1-25 were pending at the time of the Office Action.

Claims 1-25 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Wallace* US Pat. 6,647,117 in view of *Gidwani* US Pat. 6,640,239.

The reasons for these rejections as stated in this Office Action are identical to the reasons given in the office action of 12/07/05 and 4/21/06 and need not be repeated here.

The Applicant submits that the arguments provided in the responses of 21 February 2006 and 05 June 2006 show that the rejections are improper and overcome all the grounds given for the rejections, and those arguments need not be repeated here.

### **Summary of Response**

No claims were amended.

Claims 2, 4, 6-9, 11-13, and 15-17 remain as originally submitted.

Claims 1, 3, 10, and 18 remain as previously amended.

The Applicant respectfully traverses the rejections as they would apply to the claims as amended. Reconsideration is requested.

Remarks and Arguments are provided below.

**Summary of Claims Pending**

Claims 1-25 are currently pending following this response.

**Response to arguments in Office Action:**

Part of the Examiner's reasons for rejection include the statement that: "Wallace does not explicitly show signaling to the user that the AC power has failed."

Claims 1, 3, 10, and 18 were amended previously to include the limitations that the integrated services hub includes a backup battery and upon failure of the AC power, signals the user that the integrated services hub is being powered by a backup battery. This is an important part of the invention that clearly distinguishes the claimed invention from *Wallace*. *Wallace* does not have a backup battery and it would therefore be illogical to add to *Wallace* the function of signaling the user that the system is operating on a backup battery. *Wallace* specifically teaches away from use of a backup battery as being unreliable. Instead *Wallace* teaches automatically reducing power consumption to a point that the system can operate with power provided from the central office, which is effectively unlimited in terms of how long it can supply power. The present invention provides the benefit that the user will be informed that the system is operating on batteries, and therefore has a limited amount of operating time, so the user may take appropriate action to limit use and restore normal power.

The Examiner's motivation for combining the *Gidwani* reference with *Wallace* is stated to be "...to modify the invention of *Wallace* to employ power management at the Customer Premise as taught by *Gidwani* for the benefit of providing subscribers with voice over IP."

*Wallace* alone teaches the use of power management at the CPE in order to permit continued DSL lifeline voice service when main power at the CPE is lost. *Wallace* teaches reducing the services to the point that the CPE can operate with power provided from the central office. See col. 9 and in particular Table 1 that shows normal power to be more than can be supplied down a POTS line by DC feed, and lifeline power which is less than can be supplied down a POTS line by DC feed. There is no need, reason or motivation to add a function of *Gidwani* which is already present in the *Wallace* reference.

The Examiner's response to the Applicant's arguments indicates a misunderstanding of the difference between a capacitor, especially a reservoir capacitor in a DC power supply, and a backup battery.

The Examiner states that "Wallace figure 1 clearly shows AC power feed (item 355) used to charge reservoir capacitors just in case power failure occurs."

*Wallace* refers to the "... reservoir capacitors within the power supply ..." at col. 7, lines 10-20. The power supply is the "... point of use power supply 371 from which a low voltage supply is provided to the other components." Col. 3, lines 39-46. In the technology of low voltage power supplies, it is well known that AC power, e.g. from element 355, is first rectified, usually full wave rectified, and the output of the rectifiers is fed to capacitors for smoothing or filtering the rectifier outputs. These capacitors may also be referred to as reservoir capacitors, because they are also connected to voltage regulator circuits that output smooth low voltage power. The capacitors must maintain a

voltage above the regulator outputs for the regulators to maintain the designed output levels.

The *Wallace* reservoir capacitors are not used "just in case power failure occurs." They are used for their normal smoothing function in low voltage power supplies. *Wallace* takes advantage of the fact that when the AC input fails, the reservoir capacitors will have sufficient stored power to allow the low voltage regulators to continue operating for a few cycles of the input AC power, i.e. for a few milliseconds. It is well known that the output of such low voltage power supplies does not instantly drop to zero volts when the AC power is turned off. *Wallace* teaches that the switch to low power mode can occur in this fraction of a second.

The Examiner further states that: "If this were not true, *Wallace* would not need reservoir capacitors because power would be fed down the line like conventional Fail-To-Pots systems."

As noted above, *Wallace* needs reservoir capacitors in the PUPS for the normal function that they provide in low voltage power supplies. *Wallace* does not teach the need of reservoir capacitors just in case AC power is lost. Instead *Wallace* simply teaches that the normal output of low voltage power supplies can keep its system running for the few milliseconds needed to change to low power mode. If *Wallace* does not change to low power mode, the system will not operate because the line feed cannot supply the power needed in normal mode. Changing to lifeline power mode from normal mode requires that *Wallace* operate at normal mode current levels while changing to lifeline mode. The PUPS provides normal current during the few

milliseconds needed during the transition. After those few milliseconds, the system does operate solely on the power fed down the line from the central office.

The Applicant submits that *Wallace* does not teach or suggest use of backup batteries. *Wallace* actually teaches away from use of backup batteries as being unreliable. *Wallace* does teach power management, i.e. power reduction, in its customer premises equipment. *Wallace* teaches power management as a way of avoiding the need for backup batteries, since by reducing power sufficiently, the system can operate on power supplied from a central office. There is no need or reason to combine *Gidwan's* teachings of power management with *Wallace*, since *Wallace* already teaches power management.

Without considering the differences in the specific circuits and functions described above, one skilled in the electrical arts knows that there are clear structural and functional differences between a capacitor and a battery. Capacitors generally store charge electrostatically and have a voltage directly proportional to the amount of charge stored in the capacitor. As current flows into a capacitor, the voltage increases and as current flows out of a capacitor, the voltage decreases. In contrast, batteries generally store charge through a chemical reaction. A battery generally maintains a constant voltage over its operating range as current is driven into the battery and drawn from the battery. In the context of a back up battery, it should provide a substantially constant voltage to operate electronic equipment for as long a time as possible.

The Applicant submits that the suggested combination is improper since there is no motivation for such combination, and the suggested combination would not result in the claimed invention.

### CONCLUSION

The Commissioner is hereby authorized to charge payment of any further fees associated with any of the foregoing papers submitted herewith, or to credit any overpayment thereof, to Deposit Account No. 21-0765, Sprint.

Applicant respectfully submits that the present application as amended is in condition for allowance. If the Examiner has any questions or comments or otherwise feels it would be helpful in expediting the application, he is encouraged to telephone the undersigned at (972) 731-2288.

Respectfully submitted,

CONLEY ROSE, P.C.

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5700 Granite Parkway, Suite 330  
Plano, Texas 75024  
Telephone: (972) 731-2288  
Facsimile: (972) 731-2289

Albert C. Metrailler  
Albert C. Metrailler  
Reg. No. 27,145

ATTORNEY FOR APPLICANT